Fermilab

Master Planning Task Force

January 6, 2012

Members

P	Pier Oddone	**P**	Bruce Chrisman	**A**	Steve Holmes	**P**	Greg Bock
P	Vicky White	**P**	Bob Kephart	**P**	Giorgio Apollinari	**P**	Mike Lindgren
A	Roger Dixon	**A**	Steve Wiesenthal	**P**	Randy Ortgiesen	**P**	Young-Kee Kim
A	Patricia McBride	**A**	Paul Czarapata	**P**	Peter Garbincius	**P**	Steve Dixon
P	Stuart Henderson	**A**	Katie Yurkewicz				

Guests

P. Carolan, S. Webster, D. Parzyck, E. Gottschalk, K. Collins, R. Ray, C. Polly, R. Carcagno

A. Muon Campus

R. Ray (RR) presentation provided a general overview of the Muon Campus and combination of projects (both GPP and AIP) that would combine to provide facilities for the identified muon projects. In addition to a general review of the presentation, the following specific items were discussed:

1. It was noted that that the project utilize significant amounts of the existing Fermilab experimental components (enclosures, magnets, electronics) that in addition to allowing for a shorter schedule, will also result in a cost savings. Examples of this include reusing the existing Antiproton beam enclosure, Main Ring compressor building, and the repurposing of the existing accumulator beamline components.
2. It was noted that the "Debuncher Ring" is being reused as is with minor modifications. However, thought should be given to renaming the ring since it will not function as a debuncher in the new configuration.
3. The strategy for the cryogenics has been produced in concert with the Accelerator Division Cryogenics department.
4. R. Ortgiesen (RO) noted that the Main Ring pond that is needed to support the operation of the Main Ring Compressor Building will require additional investigation in order to identify improvements needed to provide reliable cooling.
5. RR noted that preliminary discussions with B. Tschirhart indicated that a proof of concept was developed that would allow a 3 Gev beam from the proposed Project X to be transported to the Muon Campus.
6. P. Oddone (PO) stated that this presentation is clear, simple and short and easy to grasp.
7. It was suggested that a summary slide be added that provides a mapping of the projects.
8. It was agreed that funding is critical for the success of the Muon Campus. The existing budget does not currently provide for this work and incremental funding would be needed.

B. ITER Facilities

R. Carcagno (RC) presentation provided an overview of the efforts to date to develop a proposal for the testing of the solenoids for the ITER project. In addition to a general review of the presentation, the following specific items were discussed:

1. Several unusual aspects of the testing requirements were noted that are greater than required typically at Fermilab. This includes the requirement for 7kv peak switching (Fermilab used 1 kv) as well as requirement for a pyrobreaker as a last line a defense. In general, it was felt that these requirements could be incorporated in the design.
2. The steel structure of the existing building will likely require investigation to determine the impact of the increased magnetic field.
3. RC noted that safety and electrical reviews were included in the proposal, but the cost of the reviewers was not. This will likely need to be revised.
4. P. Garbincius (PG) questioned who is responsible for repairs or modifications to the solenoids that could occur during the testing phase. RC noted that the proposal noted that General Atomics would have representatives on site during the testing for such repairs.
5. M. Lindgren (ML) questioned if the proposal included the increased cost of helium that would be required during the testing. RC noted that the proposal assumed that helium could increase as much as 60% over the current cost.
6. Y-K. Kim (YKK) asked if the ITER testing would impact the testing of the Mu2e solenoid or the Muon Ionization Cooling Experiment (MICE) components. G. Apollinari (GA) responded that the ITER work would be independent of testing of other components.
7. RR confirmed that the Mu2e project assumed that test facilities would be provided by the Laboratory.
8. It was decided that the status of this effort would be discussed during the upcoming visit by Mr. Jim Siegrist, the Associate Director of the Office of Science.
9. B. Kephart (BK) stated that the availability and proximity of a high field testing facility to the Illinois Accelerator Research Center (IARC) would likely be attractive to industry.
10. B. Chrisman (BC) noted that the contract mechanism for the effort would be full cost reimbursement.
11. The decision date for the proposals was not known at this time.

C. Site Planning

YKK began the discussion by noted that the upcoming site visit by Mr. Jim Siegrist would focus on the Muon Campus and the Long Baseline Neutrino Experiment (LBNE) but later visits would include discussion of Project X and site planning efforts. The following specific items were discussed:

1. PO noted that site planning should focus on the "big picture" of those facilities and infrastructure needed to carry out the program of the laboratory.
2. The need for modern, serviceable office space to support experiment users was noted as well as the continued deterioration of the existing trailers and portakamps typically found adjacent to CDF and DZero.
3. PO noted that there remains a need for suitable assembly space for planned experiments. This is likely to grow in importance once the CDF high bay is used by industry as part of the IARC program.
4. It was noted that the near term requirements during the NOvA and LBNE eras was fairly well understood, but a planning effort is needed to identify the facilities needed during the Project X era.
5. Specific area that require additional investigation include radioactive horn repair, planned uses of the Village facilities and the often discussed possibility of a Guest house,

6. K. Collins provided a drawing from the FESS GIS planning layer that could serve as a collection point for the possible improvements. The existing layer includes the known configuration of the planned accelerator and facilities, but requires input in order to provide the latest direction.
7. YKK requested that those present forward to her any ideas and concerns.

D. NML Naming Convention

YKK noted that the use of the term "NML" for the area around the New Muon Laboratory or the NML Enclosure was confusing and did not adequately reflect the current use of the area. In the future, this area should be referred to as "NML", an acromyn without meaning. If an appropriate meaning for NML is identified in the future this issue will be reconsidered.

E. Action Items from This Meeting

1. None noted.

F. Previous Action Items

1. IARC Employee Entry. Decision needed after discussions with stakeholders
2. Muon Campus Color Palette: G. Van Zandbergen requested to develop a color/material scheme for the area that includes mu2e and G-2.
3. B. Kephart was requested to assess the environmental, safety and health requirements of the planned/expected use of the existing CDF building and their impact on visitors.
4. Decision on landlord of IARC.
5. Follow up with shielding design for LArTF (MicroBooNE)
6. Follow up with P. Oddone with design approach for LArTF (YKK)
7. Obtain copies of Directorate Level Mission Readiness Documents from other laboratories (RO);
8. Develop proposed naming convention for projects and areas (KY);

G. Next Meeting

To be scheduled